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two carbon atoms, there is no 3-position and the three fluorine atoms would have to be in the 2-position.

Pages 51 and 53 have been amended to recite the phrase “the decahydronaphthalene ring has a trans form”, to be consistent with the otherwise uniform recitation of that phrase throughout the specification.

Page 69 has been amended to correct an error in the translation of the international application, of which the present application is the U.S. national stage, whereby “chlorine atom” was omitted from the description of P^a.

Page 69 has been further amended to recite clearly that the alkoxyl, alkyl, alkenyl or alkenyloxy group may have one or more fluorine atoms.

The claims have been amended to incorporate into the translation into English of the international application the amendments made in the international stage under PCT Article 19. In addition, claims 1, 10 and 11 have been amended to correct “3,3,3-trifluoroethoxy” to –2,2,2-trifluoroethoxy—in the same manner as in the specification. The dependency of claims 22, 23 and 24 has been corrected so that those claims properly depend on claim 21.

In addition to the above, minor amendments have been made to the specification and the claims to correct minor clerical errors.

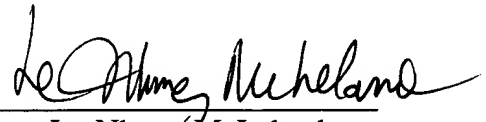
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Entry of the above amendments is respectfully requested prior to substantive examination of the application.

Respectfully submitted,

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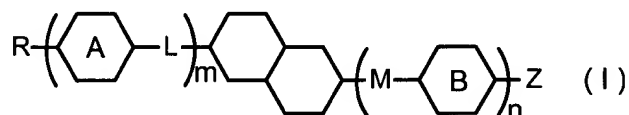
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

The paragraph beginning at page 4, line 16, has been amended as follows:

Invention 1: A compound represented by general formula (I):



(wherein, R and Z may be substituted with a halogen and represent alkyl groups or alkoxy groups having 1-16 carbon atoms, alkenyl groups having 2-16 carbon atoms, alkenyloxy groups having 3-16 carbon atoms, alkyl groups having 1-12 carbon atoms substituted with an alkoxy group having 1-10 carbon atoms, hydrogen atoms, fluorine atoms, chlorine atoms, trifluoromethoxy groups, difluoromethoxy groups, trifluoromethyl groups, [3,3,3-trifluoroethoxy] 2,2,2-trifluoroethoxy groups, cyano groups, cyanato groups, hydroxy groups or carboxy groups, m and n may be the same or different and respectively and independently represent an integer of 0-2, m+n 3, L and M may be the same or different and respectively and independently represent -CH₂CH₂-, -CH(CH₃)CH₂-, -CH₂CH(CH₃)-, -CH₂O-, -OCH₂-, -CF₂O-, -OCF₂-, -COO-, -OCO-, -CH=CH-, -CF=CF-, -C C-, -O(CH₂)₃-, -(CH₂)₃O-, -(CH₂)₄- or a single bond, rings A and B when present may be the same or different and respectively and independently represent a trans-1,4-cyclohexylene group in which one CH₂ group or more than one non-adjacent CH₂ groups in the group may be replaced by -O- or -S-, a 1,4-phenylene group in which one CH₂ group or more than one non-adjacent CH₂ groups in the group may be replaced by -N=, a 1,4-cyclohexenylene group, 1,4-bicyclo(2,2,2)octylene group, piperidine-1,4-diyl group, naphthalene-2,6-diyl group, trans-decahydronaphthalene-trans-2,6-diyl group or 1,2,3,4-

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tetrahydronaphthalene-2,6-diyl group, and although these may be substituted with a cyano group or halogen, in the case m or n represents 2, at least one of the two L or M present represents a single bond; provided that the following cases are excluded:

The paragraph beginning at page 9, line 6, has been amended as follows:

Invention 10: A compound described in Invention 1 wherein, R represents an alkyl group or alkenyl group having 1-12 carbon atoms, m represents 1, n represents 1, ring A represents a trans-1,4-cyclohexylene group, ring B represents a 3-fluoro-1,4-phenylene group or 3,5-difluoro-1,4-phenylene group, L and M represent single bonds, and Z represents a fluorine atom, chlorine atom, trifluoromethoxy group, difluoromethoxy group, trifluoromethyl group, [3,3,3-trifluoroethoxy] 2,2,2-trifluoroethoxy group or cyano group.

The paragraph beginning at page 9, line 15, has been amended as follows:

Invention 11: A compound described in Invention 1 wherein, R represents an alkyl group or alkenyl group having 1-12 carbon atoms, m represents 0, n represents 1, ring B represents a 3-fluoro-1,4-phenylene group or 3,5-difluoro-1,4-phenylene group, M represents a single bond and Z represents a fluorine atom, chlorine atom, trifluoromethoxy group, difluoromethoxy group, trifluoromethyl group, [3,3,3-trifluoroethoxy] 2,2,2-trifluoroethoxy group or cyano group.

The paragraph beginning at page 13, line 14, has been amended as follows:

Invention 22: A liquid crystal device having for its constituent feature the liquid crystal composition described in Invention [14] 21.

The paragraph beginning at page 13, line 17, has been amended as follows:

Invention 23: An active matrix drive, liquid crystal device that uses the liquid crystal composition described in Invention [14] 21.

The paragraph beginning at page 13, line 20, has been amended as follows:

Invention 24: A super twisted nematic liquid crystal device that uses the liquid crystal composition described in Invention [14] 21.

The paragraph beginning at page 14, line 7, has been amended as follows:

In general formula (I), although R and Z represent alkyl groups or alkoxy groups having 1-16 carbon atoms, alkenyl groups having 2-16 carbon atoms, alkenyloxy groups having 3-16 carbon atoms, alkyl groups having 1-12 carbon atoms substituted with alkoxy group(s) having 1-10 carbon atoms, hydrogen atoms, fluorine atoms, chlorine atoms, trifluoromethoxy groups, difluoromethoxy groups, trifluoromethyl groups, [3,3,3-trifluoroethoxy] 2,2,2-trifluoroethoxy groups, cyano groups, cyanato groups, hydroxyl groups or carboxyl groups, which may be substituted with halogen(s), a straight chain alkyl group having 1-12 carbon atoms or a straight chain alkenyl group having 2-12 carbon atoms is preferable, a straight chain alkyl group having 1-7 carbon atoms or a straight chain alkenyl group having 2-7 carbon atoms is more preferable, and the following structures are particularly preferable for R in the case of a straight chain alkenyl group:

The paragraph beginning at page 14, line 24, has been amended as follows:

(wherein, the right side is linked to a ring); a structure similar to that in R is preferable for Z in the case the dielectric anisotropy of the compound is near 0 or negative, and a fluorine atom, chlorine atom, trifluoromethoxy group, difluoromethoxy group, trifluoromethyl group, [3,3,3-trifluoroethoxy] 2,2,2-trifluoroethoxy group or cyano group is preferable, a fluorine atom, trifluoromethoxy group or cyano group is more preferable, and a fluorine atom or cyano group is particularly preferable for Z in the case the dielectric anisotropy of the compound is positive. Although m and n respectively and independently represent an integer from 0 to 2 and satisfy $m + n \leq 3$, they are preferably respectively and independently 0 or 1, and more preferably satisfy $1 \leq m + n \leq 2$.

Ring A and ring B when present may be the same or different, represent a trans-1,4-cyclohexylene group wherein one CH₂ group or more than one adjacent CH₂ groups in the group may be replaced by -O- or -S-, or a 1,4-phenylene group, 1,4-cyclohexenylene group, 1,4-bicyclo(2,2,2)octylene group, piperidine-1,4-diyl group, naphthalene-2,6-diyl group, trans-decahydronaphthalene-trans-2,6-diyl group or 1,2,3,4-tetrahydronaphthalene-2,6-diyl group wherein one CH group or more than one adjacent CH groups in the group may be replaced by -N=, and although these may be substituted with a cyano group or halogen, a 1,4-phenylene group or trans-1,4-cyclohexylene group that may be substituted with halogen is preferable, a trans-1,4-cyclohexylene group is more preferable for ring A, and a 1,4-phenylene group, 3-fluoro-1,4-phenylene group, 3,5-difluoro-1,4-phenylene group or trans-1,4-cyclohexylene group is more preferable for ring B. Although L and M when present may be the same or different, and represent -CH₂CH₂-, -CH(CH₃)CH₂-, -CH₂CH(CH₃)-, -CH₂O-, -OCH₂-, -CF₂O-,

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-OCF₂-, -COO-, -OCO-, -CH=CH-, -CF=CF-, -C C-, -O(CH₂)₃-,
-(CH₂)₃O-, -(CH₂)₄- or a single bond, -CH₂CH₂- or a single bond is
preferable for L while a single bond is particularly preferable,
and -COO-, -OCO-, -CH₂CH₂-, -C C- or a single bond is preferable
for M, while a single bond is particularly preferable.

The paragraph beginning at page 31, line 8, has been amended as follows:

(wherein, Z¹ represents an alkyl group, alkoxy group, alkyl group
substituted with an alkoxy group, hydrogen atom, fluorine atom,
chlorine atom, trifluoromethoxy group, difluoromethoxy group,
trifluoromethyl group or [3,3,3-trifluoroethoxy] 2,2,2-
trifluoroethoxy group, Z², Z³ and Z⁴ respectively and
independently represent a hydrogen atom, fluorine atom or
chlorine atom, W represents MgX (wherein, X represents a chlorine
atom, bromine atom or iodine atom), a metal atom such as Li,
B(OH)₂ or SiF(CH₃)₂, and these can be easily prepared from the
corresponding halogenated benzene derivative), by dehydrating in
the presence of acid catalyst, octahydronaphthalene derivative
(IV):

The paragraph beginning at page 51, line 5, has been amended as follows:

(wherein, ring A, R⁴, m, n, L, M¹, Z², Z³ and Z⁴ are the same as
previously defined, ring D represents a 1,4-phenylene group or
trans-1,4-cyclohexylene group, and [the 9,10 positions of] the
decahydronaphthalene ring [have] has a trans [forms] form), which
can be produced by the above methods or their combinations, can
be obtained. An organometallic reagent is then produced that is
prepared by directly iodinating or brominating this, or
lithionating with alkyl lithium, and allowing the bromine or
iodine to react, followed by reacting with a metal such as
magnesium or transmetalating using an organometallic reagent such

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as alkyl lithium. By then allowing this to react with dimethylformamide (DMF), general formula (XXXIII):

The paragraph beginning at page 51, line 17, has been amended as follows:

(wherein, ring A, ring D, R^4 , [1], m, n, L, M^1 , Z^2 , Z^3 and Z^4 are the same as previously defined, and [the 9,10 positions of] the decahydronaphthalene ring [have] has a trans [forms] form) is produced. After allowing Wittig's reagent (VIII) to react with this, by hydrolyzing and isomerizing to the trans form using base, and then repeating reaction with (VIII) and hydrolysis, alkanal derivative (XXXIV):

The paragraph beginning at page 52, line 13, has been amended as follows:

(wherein, ring A, ring D, R^3 , R^4 , 1, m, n, L, M^1 , Z^2 , Z^3 and Z^4 are the same as previously defined, and the decahydronaphthalene ring has a trans form), can be produced. In addition, after reducing alkanal derivative (XXXIV) to obtain an alcohol derivative and converting this to an alkoxide, by reacting with alkyl halide, a compound can also be produced in which R is an alkoxy group and so forth. Furthermore, the production method of a compound that does not contain an alkenyl group has been previously described.

The paragraph beginning at page 53, line 9, has been amended as follows:

(wherein, ring A, ring D, R^2 , L, m, n and M^1 are the same as previously defined and the decahydronaphthalene ring has a trans form), which can be produced according to the method of 1-13 and 1-14.

The paragraph beginning at page 55, line 15, has been amended as follows:

(wherein, R^2 , L, [X^2 , X^3 , X^4 , Z^1] Z^2 , Z^3 , Z^4 , ring A and m are the

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same as previously defined, and the decahydronaphthalene ring has a trans form), can be produced.

The paragraph beginning at page 57, line 15, has been amended as follows:

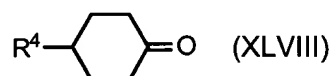
(wherein, R^2 , L, Z, Z^2 , Z^3 , Z^4 , ring A and m are the same as previously defined, the plurality of rings A may be the same or different, and the decahydronaphthalene ring has a trans form) with a fluorinating agent such as DAST, and de-protecting the protective groups as necessary, general formula (IC-2):

The paragraph beginning at page 59, line 7, has been amended as follows:

(wherein, R^4 [, W] and m are the same as previously defined) is obtained. By then hydrogenating the aromatic rings of this compound, general formula (XLVII):

The paragraph beginning at page 59, line 10, has been amended as follows:

(wherein, R^2 and m are the same as previously defined) can be produced. In addition, after reacting general formula (XLVIII):



wherein, R^4 is the same as previously defined,
with general formula (XLIIIa):

The paragraph beginning at page 61, line 9, has been amended as follows:

(wherein, [k is] k and L are the same as previously defined) is obtained in accordance with the method described above. This compound can be obtained by hydrogenating using the method described above.

The paragraph beginning at page 69, line 6, has been amended as follows:

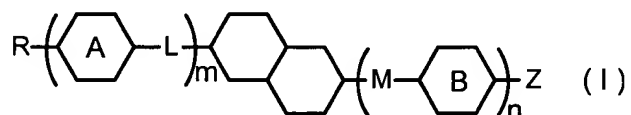
Terminal group P^a represents a fluorine atom, chlorine atom,

trifluoromethoxy group, difluoromethoxy group, trifluoromethyl group or difluoromethyl group, or an alkoxy group, alkyl group, alkenyl group or alkenyloxy group having 2 or 3 carbon atoms [that is replaced] and substituted by a fluorine atom or more than one fluorine atoms. However, a fluorine atom, trifluoromethoxy group or difluoromethoxy group is preferable, and a fluorine atoms is particularly preferable.

IN THE CLAIMS:

The claims have been amended as follows:

1. A composition represented by general formula (I):



(wherein, R and Z may be substituted with a halogen and represent alkyl groups or alkoxy groups having 1-16 carbon atoms, alkenyl groups having 2-16 carbon atoms, alkenyloxy groups having 3-16 carbon atoms, alkyl groups having 1-12 carbon atoms substituted with an alkoxy group having 1-10 carbon atoms, hydrogen atoms, fluorine atoms, chlorine atoms, trifluoromethoxy groups, difluoromethoxy groups, trifluoromethyl groups, [3,3,3-trifluoroethoxy] 2,2,2-trifluoroethoxy groups, cyano groups, cyanato groups, hydroxy groups or carboxy groups, m and n may be the same or different and respectively and independently represent an integer of 0-2, m+n 3, L and M may be the same or different and respectively and independently represent -CH₂CH₂-, -CH(CH₃)CH₂-, -CH₂CH(CH₃)-, -CH₂O-, -OCH₂-, -CF₂O-, -OCF₂-, -COO-, -OCO-, -CH=CH-, -CF=CF-, -C C-, -O(CH₂)₃-, -(CH₂)₃O-, -(CH₂)₄- or a single bond, rings A and B when present may be the same or different and respectively and independently represent a trans-

1,4-cyclohexylene group in which one CH₂ group or more than one non-adjacent CH₂ groups in the group may be replaced by -O- or -S-, a 1,4-phenylene group in which one CH₂ group or more than one non-adjacent CH₂ groups in the group may be replaced by -N=, a 1,4-cyclohexenylene group, 1,4-bicyclo(2,2,2)octylene group, piperidine-1,4-diyl group, naphthalene-2,6-diyl group, trans-decahydronaphthalene-trans-2,6-diyl group or 1,2,3,4-tetrahydronaphthalene-2,6-diyl group, and although these may be substituted with a cyano group or halogen, in the case m or n represents 2, at least one of the two L or M present represents a single bond; provided that the following cases are excluded:

- i. case in which m and n represent 0, R represents a non-substituted alkyl group, and Z represents a non-substituted alkyl group or cyano group;
- ii. case in which either m or n represents 1, the other of m or n represents 0, ring A or ring B when present represents a 1,4-cyclohexylene group, L or M when present represents a single bond, R or Z bonded to a decahydronaphthalene ring represents a non-substituted alkyl group, and R or Z bonded to a 1,4-cyclohexylene group represents a non-substituted alkyl group, alkoxy group or alkenyloxy group;
- iii. case in which either m or n represents 1, the other m or n represents 0, ring A or ring B when present represents a 1,4-cyclohexylene group, L when present represents -OCO- or M when present represents -COO-, R or Z bonded to a decahydronaphthalene ring represents a non-substituted alkyl group, and R or Z bonded to a 1,4-cyclohexylene group represents a non-substituted alkyl group or cyano group;
- iv. case in which either m or n represents 1, the other m or n represents 0, ring A or ring B when present represents a non-substituted 1,4-phenylene group, L when present represents -OCO-

or M when present represents -COO-, L or M when present represents a single bond, R or Z bonded to a decahydronaphthalene ring represents an alkyl group, and R or Z bonded to a 1,4-phenylene group represents a non-substituted alkyl group, alkoxy group, hydroxyl group, hydrogen atom, carboxyl group or cyano group;

v. case in which either m or n represents 1, the other m or n represents 0, ring A or ring B when present represent a non-substituted 1,4-phenylene group, L or M when present represents a single bond, R or Z bonded to a decahydronaphthalene ring represents a non-substituted alkoxy group, and R or Z bonded to a 1,4-phenylene group represents a non-substituted alkyl group;

vi. case in which either m or n represents 1, the other m or n represents 0, ring A or ring B when present represents a trans-decahydronaphthalene-trans-2,6-diyl group, L when present represents -OCO-, M when present represents -COO- or L or M when present represent a single bond, and R and Z represent non-substituted alkoxy groups;

vii. case in which either m or n represents 1, the other m or n represents 0, ring A or ring B when present represents a non-substituted naphthalene-2,6-diyl group, L when present represents -OCO- or M when present represents -COO-, R or Z bonded to a decahydronaphthalene ring represents a non-substituted alkyl group, and R or Z bonded to a naphthalene-2,6-diyl group represents a non-substituted alkyl group, bromine atom or cyano group, or the case in which R or Z bonded to a decahydronaphthalene ring represents a non-substituted alkoxy group, and R or Z bonded to a naphthalene-2,6-diyl group represents a non-substituted alkyl group or cyano group;

viii. case in which n represents 2, m represents 0, R represents a non-substituted alkyl group, M when present adjacent to a

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decahydronaphthalene ring represents -COO-, at least one of rings B present represents a non-substituted 1,4-phenylene group, and Z represents a non-substituted alkyl group or bromine atom, or the case in which at least one of rings B present represents a pyrimidine-2,5-diyl group, and Z represents a non-substituted alkyl group, alkoxy group or cyano group;

ix. case in which m and n represent 1, ring A represents a trans-decahydronaphthalene-trans-2,6-diyl group or a 1,4-cyclohexylene group, ring B represents a non-substituted 1,4-phenylene group or 1,4-cyclohexylene group, L represents a single bond, M represents -COO-, -OCO-, -CH₂O- or -OCH₂-, and R and Z represent non-substituted alkyl groups; and,

applying similarly to compounds equivalent to the above using combinations of the abbreviations).

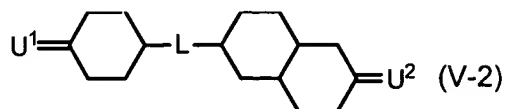
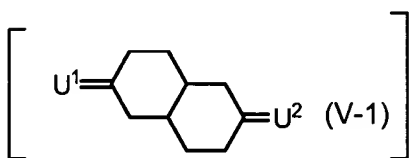
10. (Amended) A compound according to claim 1 wherein, R represents an alkyl group or alkenyl group having 1-12 carbon atoms, m represents 1, n represents 1, ring A represents a trans-1,4-cyclohexylene group, ring B represents a 3-fluoro-1,4-phenylene group or 3,5-difluoro-1,4-phenylene group, L and M represent single bonds, and Z represents a fluorine atom, chlorine atom, trifluoromethoxy group, difluoromethoxy group, trifluoromethyl group, [3,3,3-trifluoroethoxy] 2,2,2-trifluoroethoxy group or cyano group.

11. (Amended) A compound according to claim 1 wherein, R represents an alkyl group or alkenyl group having 1-12 carbon atoms, m represents 0, n represents 1, ring B represents a 3-fluoro-1,4-phenylene group or 3,5-difluoro-1,4-phenylene group, M represents a single bond and Z represents a fluorine atom, chlorine atom, trifluoromethoxy group, difluoromethoxy group,

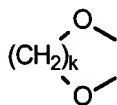
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trifluoromethyl group, [3,3,3-trifluoroethoxy] 2,2,2-trifluoroethoxy group or cyano group.

16. (Amended) A compound represented by general formula [(V-1) or general formula] (V-2):

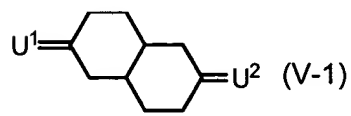


(wherein, U^1 and U^2 respectively and independently represent an oxygen atom or the following structure:

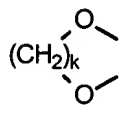


(wherein, k represents an integer from 1 to 7), L is the same as previously defined in general formula (I), and the decahydronaphthalene ring has a trans form).

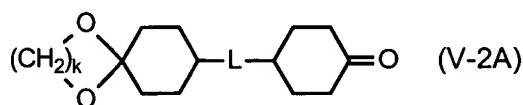
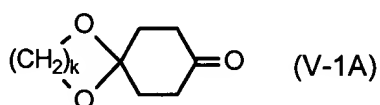
17. (Amended) A production method of general formula [(V-1) or general formula] (V-2) according to claim 16
or general formula (V-1):



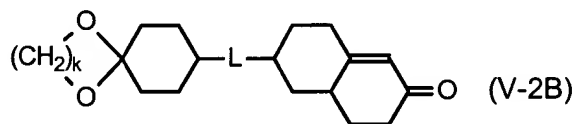
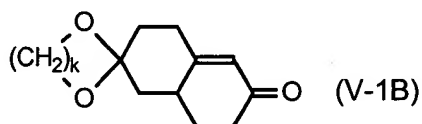
wherein, U^1 and U^2 respectively and independently represent an oxygen atom or the following structure:



(wherein, k represents an integer from 1 to 7), L is the same as previously defined in general formula (I), and the decahydronaphthalene ring has a trans form)
the method including: converting a compound represented by general formula (V-1A) or general formula (V-2A):

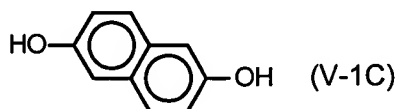


(wherein, k is the same as previously defined in general formula [V-1] or general formula [V-2], and L is the same as previously defined in general formula (I)) into an enamine using a secondary amine, and reacting it with methyl vinyl ketone to obtain a compound represented by general formula (V-1B) or general formula (V-2B)



(wherein, k is the same as previously defined in general formula [V-1] or general formula [V-2], and L is the same as previously defined in general formula (I)) followed by reductive hydrogenation.

18. (Amended) A production method of general formula (V-1) according to claim [16] 17 including: reducing a compound represented by formula (V-1C) by hydrogen in the presence of a metal catalyst:



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oxidizing the hydroxyl groups as necessary, and protecting the carbonyl groups as necessary.

22. (Amended) A liquid crystal device having for its constituent feature the liquid crystal composition according to claim [14] 21.

23. (Amended) An active matrix drive, liquid crystal device that uses the liquid crystal composition according to claim [14] 21.

24. (Amended) A super twisted nematic liquid crystal device that uses the liquid crystal composition according to claim [14] 21.